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129355 PIGMENT  
65557 STERIC  
310017 ORGANIC  
238246 IONIC  
1362956 GROUP  
0 ORGANIC IONIC GROUP  
(ORGANIC(W) IONIC(W) GROUP)

13283 AMPHIPHILIC

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129355 PIGMENT  
65557 STERIC  
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L2 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:265513 HCAPLUS

DOCUMENT NUMBER: 134:297228

TITLE: Modified pigments having **steric** and  
**amphiphilic** groups

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PATENT ASSIGNEE(S): Cabot Corporation, USA

SOURCE: PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001025340	A1	20010412	WO 2000-US26957	20000929
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1220879	A1	20020710	EP 2000-967166	20000929
EP 1220879	B1	20030507		
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003511513	T2	20030325	JP 2001-528499	20000929
AT 239770	E	20030515	AT 2000-967166	20000929
PRIORITY APPLN. INFO.:			US 1999-157284P P	19991001
			WO 2000-US26957 W	20000929

AB Various modified **pigment** products are described which are preferably capable of being dispersed in a variety of materials such as coatings, inks, toners, films, plastics, polymers, elastomers, and the like. The modified pigments are pigments having attached (a) at least one **steric** group and (b) at least one organic **ionic** group and at least one **amphiphilic** counterion, wherein the **amphiphilic** counterion has a charge opposite to that of the organic **ionic** group. In addition, inks, coatings, toners, films, plastics, polymers, elastomers, and the like containing the modified **pigment** products of the present invention are described. Methods of making the modified **pigment** products are also described. Thus, mixing 600 g carbon black (surface area 200 m<sup>2</sup>/g; DBP absorption 117 mL/100 g) with 31.5 g sulfanilic acid, adding a solution of 6.2 g of NaNO<sub>2</sub> in 600 g of water, mixing for about 10 min, and drying in an oven at 70° gave a

Carbon black bearing 0.22 mmol C<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Na groups, 20 g of which was combined with 26.9 g H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>(C<sub>3</sub>H<sub>6</sub>O)<sub>n</sub>C<sub>4</sub>H<sub>9</sub> and 2.3 g methanesulfonic acid in a mixture of 50 mL water and 150 mL 2-butanone, stirred at room temperature for 1 h and at 60° for 1 h, mixed with a mixture of 4-CH<sub>3</sub>CH(NH<sub>2</sub>)C<sub>6</sub>H<sub>4</sub>(OC<sub>3</sub>H<sub>6</sub>)<sub>3</sub>OH 7.5, methanesulfonic acid 0.38, water 40 and 2-butanone 40 g, stirred for 1 h and worked up to give a carbon black bearing polymeric group and **amphiphilic** salt of C<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>- group.

REFERENCE COUNT:

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